/345 cont./

433 224 198 Outside these official expeditions they doubtless used to hunt for pleasure or simply to interrupt the monotony of their menu.

224 411 Quadrupeds were killed with arrows with lanceolate tips, originally of wood, today of iron (Plates VIII and IX, 2); small game, with arrows tipped with a barbed wooden rod [223] (Plate IX, 3-5). Birds were taken in traps or felled with a special arrow having a splayed ferrule (Plates X-XI).

224 [231] Anyone who has seen the little dogs of the Chiriguano Indians, with elongated /346/ muzzle, pointed ears, short hair, and arched tail will ask with surprise how animals so miserable, stupid, and snappish could have been trained to render service to man. Nevertheless, such seems to have been the case. For hunting the peccary, for example, the Indians employ the dogs, who track them and /Figs. 12 and 13 appear here/ force them to hide in their dens, from which they are smoked out and felled with blows of a stick when they try to run away. At least this is how the inhabitants of the village of Saladito (upper Pilcomayo) told me they had killed a peccary which they showed me at the time I was there.

433 224 184 For the modern Chiriguano, hunting has lost its reason for existing as an activity having an economic character, except perhaps /Plates VIII, IX, X, and XI appear here/ /347/ /Fig. 14 appears here/ for those of this nation who live [352] in the region of the upper Pilcomayo. At least this is the im- [412] pression I had after examining their huts: the bedsteads or wooden cots were often covered with peccary skins and the old deerhorn awls (Fig. 12) numerous enough to be able to be exchanged for a trifle. The relative abundance of these objects proves that among these Indians hunting has not been relegated /Fig. 15 appears here/ to the rank of a simple sport and that it keeps, at least in part, its past importance.

[799] The contrast is striking if one then goes into the zone of the [411] Franciscan missions: there, more peccary skins, more perforators made of deerhorn, more ostrich feathers. In the villages of the upper Pilcomayo there is no cabin, poor as it may be, in which a bow and a bundle of arrows are not slipped

[TEXT Continues on P. 89]

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Fig. 14. Hunting arrow. Chiriguano. The point is formed by an iron rod to which a nail has been fastened to form a barb. This point is held in the shaft by means of a wooden peg. Prov.: Ñawirenda. (1/4 nat. size.)

Fig. 15. Upper tip of a lorero (long wand with a noose at the end, with which the Chiriguano catch wild parrots they have attracted by means of tame ones). Prov.: Ivu. (1/3 nat. size.)

/347 cont./
433 between the roof beams. Once out of this region the ethnog-
224 rapher will have all the difficulties in the world to acquire
184 these weapons for his collections. If they are offered to him,
[411] they will be either a few souvenirs of former days kept by an old man or crudely made specimens without any value other than that of a toy or a sport accessory for some rare lover of hunting.

224 The Indians of the semi-independent valley of Caipipendí
411 are still, in some villages, capable of making a bow and using
184 it. The arrows, which I bought from them in rather large quantity, almost all belonged to a single type and were intended, from what they told me, for killing the yakú (pavo del monte /wild turkey/ (Penelope sp.). They are long reeds armed with two barbed wooden rods (Plate IX, 1). One must not conclude that the yakú, abundant as they may be, rep-
[433] resent an appreciable food resource. Besides, hunting is scarcely practiced except by the young men, who do it for
[126] fun. The Indian who gave up to me the handsomest lot of
[425] these arrows felt some remorse about it; for, as he explained to me, /348/ they belonged to his little boy, who would not fail to cry when he found out that his father had sold them without his consent.

857 Chiriguano children are even more ardent about shoot-
868 ing with a bow than ours. One can see them run around the
224 village trying to shoot down with little miniature arrows (Plate XII, 2 and 4) the birds which light within their reach. Contrary to what took place formerly, once grown up they will not benefit from the skill they have thus acquired. /Fig. 16 appears here./

● 223 Some Indians of the Caipipendí valley sold me large
[126] bunches of nandu feathers. I could not find out whether they had taken them from birds killed in the region or whether they had been hunting them in the east nearer to the great deserts. That would not have been at all improbable, for nandus are certainly not numerous in this region; in a month's stay I
287 did not see any. These feathers serve for fashioning /Fig. 17
439 appears here/ feather dusters, which the Chiriguano sell in the

[Text continues on p. 91]

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Fig. 16. Perch with troughs for tame parrots which the Chiriguano use for catching wild ones. Prov.: Ñawirenda. (1/10 nat. size.)

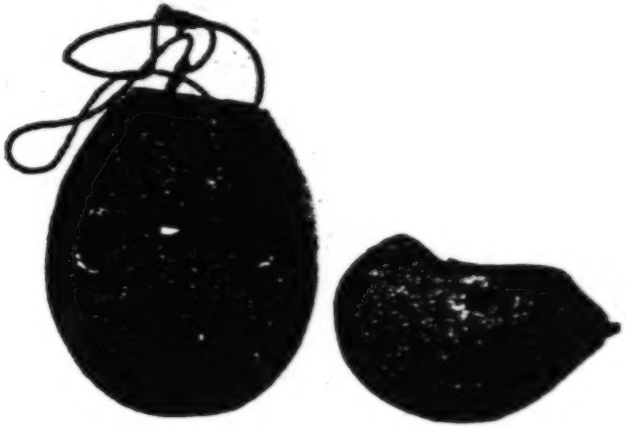

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Fig. 17. Perforated calabashes in which the Chiriguano put chicks to protect them from birds of prey. Prov.: a. Carurutí; b. Ibopeytí. (1/4 nat. size.)

2:Métraux E-5 (1929) 1948 SF10 Chiriguano SF10 ●
Chane SF8

The migrations, wars, and the religious conversion of the *Chiriguano* have been the subjects of many historical monographs. The most important of these are by Corrado (1884), Serrano y Sanz (1898), Domínguez (1918), Gaulia (1929 a, and b), Métraux (1930 b), Coni (1925), Moreno (1929), and Finot (1939). The Jesuit missionary work among the *Chiriguano* has been described by Lozano (1941) and Muriel (1918).

CULTURE

SUBSISTENCE ACTIVITIES

As today *Chiriguano* and *Chané* share in the same culture, the following data may apply to both tribes.

Farming.—The *Chané*, conquered by the *Chiriguano*, were proficient farmers who, though practicing a tropical type of agriculture, were probably acquainted with many of the methods of cultivation of the Andean area. The *Chiriguano* adopted their traditions. The new habitat of the *Chiriguano* did not offer the same resources for hunting and fishing as had their homeland. Therefore, these Indians depend on farming to a larger extent than any other *Tupí-Guaraní tribe*. The basis of their livelihood is maize, of which they have 11 varieties, all related to those of Paraguay. Then follow in order of importance: Pumpkins, beans (11 varieties), sweet potatoes, sweet manioc, peanuts, and some Barbary figs (*Opuntia* sp). Sweet potatoes were grown on a large scale by the *Chané* of the Parapeti River.

These Indians also raise cotton, tobacco, urucú, and, in the Parapeti region, reeds for arrow shafts (*Arundo donax*). Plants of the Old World adopted by the *Chiriguano* include melons, watermelons, oranges, sugarcane, and sorghum.

Chiriguano men clear the fields and surround them with a tall fence as a protection against the inroads of wild or domesticated animals, a task which is considered to be particularly strenuous. They also till the soil, but at harvest time they are assisted by the women and children. The latter, armed with slings, drive away the parakeets and other birds which prey on the crops. Nordenskiöld (1912, p. 183) observed that among the *Chané* of the Itiyuro region large maize fields were tended by men while pumpkins and beans were raised by the women.

Collecting wild food.—When their crops fail, the *Chiriguano* subsist on the same species of pods and fruits as those collected by the Chaco Indians: Algarrobo, tusca, mistol, caraguatá, and other plant foods.

Hunting.—Hunting is a very secondary economic activity, at least in modern times. Peccaries, which are the main game animal, are hunted with specially trained dogs and killed with bows and arrows or with clubs. Rheas, which are abundant in the Chaco plains, are caught with bolas. Pigeons are captured with clap nets. Special arrows with two points are used for hunting yacu birds (*Penelope* sp.).

2:Métraux E-5 (1929) 1948 SF10 Chiriguano SF10
Chane SF8

C Ce 226

Fishing.—Fishing is worth while only for those *Chiriguano* and *Chané* who live along the upper Pilcomayo or Bermejo Rivers and, to lesser extent, for the *Chané* of the Parapetí and Itiyuro Rivers. Methods of fishing vary somewhat with the regions. Along the Pilcomayo River, fish are caught with iron hooks, with dipnets, similar to those of the Chaco Indians, with the bow and arrow, and with long two-pronged spears. Fishing baskets are used in combination with stone dams (fig. 57).

C Ce [171]

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FIGURE 57.—*Chiriguano* fish dam in the Pilcomayo River. *A* is entrance; *B* are pockets where fish are caught. (Redrawn from Nordenskiöld, 1920, fig. 14.)

Among the *Chané* of the Itiyuro, fishing is done almost exclusively by women and children. They use hooks, but more often they capture fish in small ponds which they cut from the main stream by means of weirs. They also catch small fish in narrow-necked gourds into which they place chicha dregs as a bait. The *Chané* of the Parapetí scoop fish with nets or shoot them with arrows tipped with a bundle of cactus thorns (Nordenskiöld, 1912, pp. 184–185).

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Domesticated animals.—Modern *Chiriguano* raise sheep, cattle, horses, and chickens. Their dogs are so completely mongrel that their European or Indian origin cannot be ascertained. The *Chiriguano* were probably acquainted with chickens when they arrived in their present territory, for they use a *Guaraní* term for them. Pets are not numerous in their villages; most of them are parrots which were captured by means of a noose attached to the end of a long pole. In order to approach the wild birds, the Indians use tame parrots and decoys.

C 231

C [223]

Cooking.—Maize is prepared in a great many ways. The grains are eaten on the cob, roasted in special pans, boiled in water, or ground into flour, which is served with every meal. One method of preparing maize flour is to steam it in a perforated bowl.

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2:Métraux E-5 (1929) 1948 SF10 Chiriguano SF10
Chane SF8

Fire.—For several generations the *Chiriguano* and *Chané* have used steel and flint for making fire. The fire drill is, however, remembered in their mythology.

Weapons.—The *Chiriguano* bow has an average length of 4 feet (1.2 m.); the stave is flat on the belly and convex on the back. Both ends are sharpened to prevent the string of twisted hide from slipping.

Arrows are tipped with carefully barbed rods, with two rods barbed along the outer edges, (fig. 59, *b*) with flat lanceolate heads, or with a conical knob (bird arrow). The arrows armed with two diverging rods are used to shoot large birds, such as the yacu (*Penelope* sp.). Fishing arrows of the *Chané* bristle with cactus thorns. Today arrows ending in a sharp wooden rod are rare, as the modern arrows are usually tipped with heavy wires. The shafts are made of cultivated reeds (*Arundo donax*). Formerly, the *Chané* used the uva grass (*Gynerium sagittatum*). Feathering, which is of the cemented type, is sometimes omitted.

The clubs of the *Chiriguano* in the 17th century were short and ended in a flat, oval head, a shape somewhat related to the ancient *Tupinamba* club. These clubs have disappeared (only a single specimen could be obtained in 1929 by Métraux) and have been replaced by simple cudgels that serve only to knock down wild pigs.

Chiriguano in direct contact with the *Quechua* have woolen slings; those living farther to the east have slings made of caraguatá fibers, which they use mainly to chase birds from the fields. The pellet bow is common among the *Chiriguano* and *Chané*, but is merely a toy for boys.

SOCIAL AND POLITICAL ORGANIZATION

Originally, the *Chiriguano* community consisted of a few extended families or lineages, strictly patrilineal. Modern villages are composed of many small biological families bound by relationship ties or by their allegiance to a common chief.

Chiriguano chiefs (mburubicha) of old were men distinguished by their courage, their eloquence, and often by their magic power. They enjoyed considerable prestige and held no little authority. Some of them (tubicha rubicha) extended their influence over a wide area and were recognized as a supreme chief by the local chieftains. The main function of a chief was to settle quarrels within the village, to punish thieves, to see that people worked in the fields at the proper time, to arrange feasts, and to lead his men in war. Chiefs also had right of eminent domain over the land. Sometimes a chief was assisted by an informal council consisting of shamans and of the oldest and bravest men of the community. As a rule, a chief, even if he was powerful, led the same type of life as any of his subjects; in recent time some chiefs had servants. Some aristocratic pride was evidenced by the members of their family.

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*136 *825 uprising, should this pair of owls start to sing on occasion in a town or near the house of some whites. The second is called "Surumucucu," because its cry sounds like this. Neither of the two is harmful. They are plentiful where there are trees: the first eats bats, toads, and mice, for which reason it is not attractive to the Chiriguano, but it is a very pretty bird, and its feathers are like the finest velvet. The second is good food for the Indians, who hunt it on bright moonlit nights. [223] [269]

CARDINAL. -- A little bird the size of a swallow, with a red crest, ash-gray feathers, and a white breast. The region of the cardinals begins in Parapiti Grande; occasionally a pair of them appear in some part of Yvu, and there are also some in the countryside of Carandaiti. I have seen them in both places, as I have also seen flocks of 15 to 20 in Parapiti. It has no peculiarity other than its crest and its song at certain times of the day. The Chiriguano Indians of Parapiti and some Tapii of Isoso try to catch this little bird alive and take it to the interior of the Republic, to Sucre or Potosí, to sell or trade it /53/ for used clothing; in this sense it is a small, lucrative business. [439]

*136 *[825] CARPINTERO or PICAMADEROS /woodpeckers/. -- This is a black bird with a fiery red crest, and it is called "Arapatuare" in Chiriguano. When it flies away in fright, it makes a loud noise with its wings, is fast, and flies in a straight line. It is the continual desire of this little creature the size of a rondón to clamber tirelessly about dry and hollow trees, beating on them with its hard beak in order to make come out and to eat the insects that they contain. Sometimes the traveler, upon hearing these noises in the woods, believes that someone is cutting firewood and doing carpentry, or is inclined to believe, from the prolonged rattling of a hollow, dry tree being struck by the woodpecker, that it is about to fall, if he does not know that it is being pecked by this little bird. Both of these things have happened to me on occasion. The Chiriguano does not waste time hunting the woodpecker, because it is a semisolitary bird, and scarcely three or four are found together in one place. Only the children hunt them for fun and in order to learn to be accurate in the handling of bow and arrow. [223] [859]

/54 cont./

#134 are somewhat grown. the condors have another procedure when the former are far from their mothers: two or three condors together push them toward some precipice, beating them with their wings, and, as they cannot escape, they run from side to side at the edge of the precipice and easily slip and fall into it, where, if they are not killed, they are left unable to run, either because they may have injured their legs or because the place they fell into is too narrow. The birds that did this then come down, as do others that see it, and they strike the animal repeatedly with their cruel wings and beaks and make an excellent lunch or supper of it, returning the next day to finish and to look for other careless calves.

● [223] Nobody hunts condors, because they have no charm for either the Indians or the whites: the latter, of course, must defend their cattle when the condor is harmful, the same as is done with the jaguar. It is difficult to kill the latter because of its boldness and ferocity, and it is just as difficult to kill the former, because it will take flight at once, since it knows instinctively when it has done some notable harm. Nevertheless, as the number of cattle is great everywhere, the damage that these two creatures do is not great since it is not done to a single owner.

#134 #825 [262] CHUÑA /South American crane/. -- Some say that this semiflying bird is the "snake hunter," that is, the bird which hunts and feeds on vipers and snakes, but it seems that they are not correct, since the Chiriguano who constantly hunt it to eat its meat insist that its food is not snakes, but other small animals, such as beetles, locusts, crickets, and other insects, from which it can be deduced that the others are in error. The Indians from the right bank of the Parapiti southward call this bird "Sariama," and from the left northward the Indians and whites call it "Socori," as it is called in Guarayos.

#134 The chuña has long red legs, ash-gray feathers, and a crest; it runs across the pampas and low hills a great deal and also flies sometimes, especially when it is pursued. It sings in the morning /55/ and in the evening. They are in every section, but not abundantly; they generally go in the company

/55 cont./

of a mate. and at the most there are three of them. Both sing at the same time. The female begins. and then the male continues. the song thus being prolonged for some four or five minutes. It is a very strange song or cry. They say that these birds announce the approach of wind or rain. and. if it is cloudy. they foretell the approach of clear or cloudless weather. Hunters who do not have the help of good dogs can only capture this bird with difficulty. because it runs and flies when hard pressed.

GARZA /heron/. -- This is a rather large. but light bird. It has a thick and somewhat long beak. flies little. and its locale is the lakes. ponds. and banks of rivers. where it finds its food. There are two kinds. one completely white. very white. for which reason the Chiriguano call it "Guiranti." or white bird. and the other is ash-gray and stays in the same places. The Chiriguano do not hunt them. because they have very little meat.

GALLINAZO /buzzard/. -- This is a black bird.and repugnant to the sight. especially because of its bald head and neck: it feeds on the carcasses of dead animals. even a human body. nor does it refuse the chance to rip out the entrails and kill calves. lambs. and newborn suckling pigs. which it finds asleep and at a distance from their mothers. In the first instance it constitutes an excellent purifier of the air by making all the miasmas which come from the carrion disappear. because when there is any they finish it off in a few hours. for when it is abundant many of them gather. The buzzards discover dead animals and cattle killed by the jaguar: there are usually some turkey buzzards over the cattle and sheep corrals. where. despite the cleaning that they do. they sooner or later cause some damage.

The Indian rarely hunts the buzzard. because its meat is tough and strong-smelling. He does. however. kill it occasionally as a remedy. The warm blood of this animal is of some use in curing his double chin /papada/. or that of his daughter. who may be ashamed of such a protuberance. For this purpose the blood is placed on a strip of linen and tied around the throat. They state that it does have some effect. but this must have to do with incipient double-chins of a few ounces.

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*136 saddle their horses as if they were going out to hunt wild beasts.

*136 *825 Other Christians and Chiriguano also defend their fields from parrots in a different way. They kill two or three dogs, or, lacking these, goats or old sheep, put them in the tops of trees a certain distance apart in the fields, and the parrots will not even come close to them. Let my readers not believe, however, that parrots are afraid of corpses, as some or most people believe around here; what they are running away from are the buzzards, who flutter about their meal or who sit in the said trees, attracted by the bait, for which reason one must take the precaution of placing the bait where the buzzards cannot reach it with their beaks or where it is not easy for them to roost. Thus some become tired and others arrive, the maize ripens, dries, and the parrots will go on their way or go to eat the seed of the soto, which is also abundant at farming time. Nevertheless, most people prefer to have their children in the fields to shout continuously to scare off the parrots or to shoot arrows and throw stones at them.

[262] Even the adult Chiriguano engage in this work, because the meat of the parrot is very delicious, in spite of the fact that some are very tough, and they prefer it to any other bird, wild or domesticated. /58/ In order to catch talking parrots

[223] alive, they tie up a tame one, and they capture with traps the companions who approach the prisoner.

*136 HORNERO. -- This little bird is called "Tiantía" in Chiriguano. It is red in color and is the size of the gorrión /a Spanish bird some 12 centimeters long from head to tail/. It is tame and not easily frightened, doubtless because nobody chases it. It is called hornero /baker/ because of the structure of its nest. What an admirable thing that so small a bird should make with its beak a true oven in miniature! When it has just rained, the little mason then begins to make its house, but if the rain is late, it flies to the shores of rivers, rapids, or lakes and gathers the necessary material. It is not satisfied with an old house; it wants a new one every year. For this reason certain trees or their branches are full of these ovens.

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*136 MATICO. -- This is a very pretty little bird with three colors: yellow, red, and black. The first color predominates. It is easily tamed, but its song is not varied. It is amusing to put it in front of a mirror, especially if it is a male. It will ruffle up, sing vigorously, and charge at its reflected figure, believing it to be its competitor. As far as the right bank of the Parapiti River, beyond the last ridge of the Andes, which is called Aguaragüe, not a single one is seen. They begin to be seen on the left bank precisely at the San Francisco Mission. The San Antonio del Parapiti Mission, located on the same bank, is scarcely 5,490 meters away from the San Francisco one, and nevertheless nobody sees a matico around it. Either it cannot find adequate food there, or the cold of the mornings may be felt more because the mountains are very close. The Chiriguano and Tapii catch the matico alive and take it far away to sell it.

[223] [439]

MIRLO /blackbird/. -- This type of bird is not numerous in the region nor is it found everywhere. It likes to stay where there are streams of water so that it can sing to its satisfaction. It is shiny black and somewhat large. It sings strongly and very well after the sun rises and before this heavenly body sets. The clear, loud song of this bird, which can be heard at a great distance, is a delight to the traveler. The whites call it chivango.

MURCIÉLAGO /bat/. -- Bats are abundant in the hot season and are very repugnant; they establish their domain in certain buildings with a straw roof or in a similar place, dirtying everything with their droppings and causing true loathing. Churches which have paneled ceilings and which have no screens or gratings in their windows are full of these repugnant animals, and wherever they dwell there is little cleanness. At night they bite every kind of animal and even a sleeping man. There are two types of them, one small and the other large.

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*825 773 The Chiriguano Indian has a confused idea about the end of the world, which he calls "ara iyapi," a temporal term. At that time, he says, "andira guasu," a large bat, will appear, will eat us up, and everything will come to an end. The lechuza and the buho are enemies of the bat, and they kill it not just for the sake of killing, but because it is delicious food for them.

*136 *[825] PALOMA /dove/. -- There are four types, to wit: torcaces /wild pigeons/, monteñas, ulinchas, and tórtolas /turtledoves/, whose respective names in /60/ Chiriguano are "picasu, picasúi, picui, yeruti." The large ones go in flocks which obscure the sun in the season and after the maize harvest in May, June, July, and August. The middle-sized ones are called monteñas, because their regular abode is in the thickets; they too are numerous and perhaps more delicious than the first. They are as sociable as the torcaces, and they fly in very large flocks. The ulinchas, which are very small, are much more abundant and delicious; they approach houses and even come into the patios. They look for trees with full tops to sleep in. The last-named, as I have already said, are a kind of turtledove and go in pairs. Their song is very sad.

• 223 To catch the torcaces the Indian climbs a tree where they roost in numbers and sets and ties one which he has caught alive; he makes a kind of oven with straw, open underneath, and hides there. He carries arrows and waits for the torcaces to come to visit their companion, and, if they do not see the enemy who is hidden there, they are wounded and many fall, until the Indian runs out of arrows. The same thing is done on the ground where they come down to drink.

They kill the monteñas and ulinchas at night. Both children and adults go about with torches of fire, the latter blinds them, they fall, and they kill them with clubs. In May and June in certain pampas and low hills, a spectator may think he is witnessing the strategy which Hannibal used against Fabius Maximus, when, in order to make his way through the narrow pass of Casilino Valley near the Volturno

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• 223 River, he tied inflammable material to the horns of 2,000 oxen, lighted it, and drove the oxen up to the heights, thus managing to get through and gain a victory over the Roman army, which, believing the oxen to be enemies running in every direction, abandoned the narrow pass to defend other positions and was defeated the next day. In the above-
[221] [262] mentioned months young men and children sleep little at night in order to go hunting for doves and to have a delicious meal the next day with their families, since the slaughter of doves and other little birds which are unfortunate enough to sleep near them is great.

*136 PATO /duck/. -- Where there are lakes or ponds there are innumerable ducks of many sizes and colors; some are so large that they seem to be geese. There are black, white,
[262] pink, and brown ones; the last are fat and delicious. The Chiriguano eats the meat of the duck, but he does not pursue
[223] [222] it, because he finds this so difficult. When he can, he hunts it, but more because this web-footed bird puts or deposits its eggs on the shores of a lake, on top of the grass or hidden among the reeds which grow near lakes; these are /61/ avidly sought by young and old, men and women, because the water is not deep in these places. The duck is called "Ipe" in Chiriguano which is, literally in the water, since lake is called "Ipa," or wide or extended water.

PAVA /turkey/. -- They have their favorite places and do not go far from them; they will be found there exactly at sunrise and before nightfall. They reveal themselves when a hunter or anyone else approaches, because they immediately begin to cackle and to fly from tree to tree in fear, which causes a disagreeable noise. The turkeys are as big as a large chicken, with quite a long tail and black feathers.
*[825] There are two kinds: the larger one is called "Yacu" and is found in abundance from the right bank of the stream Cuevo; the others are called charatas by the whites, "Anancua" in Chiriguano. These are numerous from the left bank of the Parapiti River in the province of Lagunillas.

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*136 [231] Both types are very delicious, but the charata is best. Charatas are easily domesticated when small. The male is very ferocious in the domesticated state, attacks everybody, even the people of the house. The charatas make a great racket before sunrise with their strong and repugnant cackling. Cuevo is some 20 leagues from Parapiti and a little more than two from the Yvu Mission; a charata is neither seen nor heard in the former region or in its vicinity, but an occasional pair of them is found in the latter, and as one goes north from this mission toward Parapiti, the number of these birds increase.

*[825] PELICAN. -- This bird is called "Tanga" in Chiriguano, because when it sings it seems to be saying, "Tangá, Tinguí, Tangá." River banks and lake shores are its locale. There it finds its food. It feeds on newly born toads, which have a little tail, and it also eats small fish. It sleeps in trees and flies perfectly in spite of its size. It flies at a great height, and along its way it sings every so often, and the Indians say that when the pelican sings rain is near. This bird is not numerous; they always go by twos and sometimes threes. [262] Their meat is good to the Chiriguano.

PERDIZ /partridge/. -- This type of bird is not lacking either in the Chiriguano area. Partridges are of three types, each larger than the other. They live in the pampas, in the woods, and in the hills. In the idiom the true partridge is called "Inambu," the second, which has a preference for the hills, is called "Guáico," and it whistles like muleteers who are driving asses. The third, which is the codorniz /quail/, is called /62/ "Inambu tindi." There is a fourth large partridge, which is like the first, but red in color, and for this reason is called "Inambu pinta," but the guáico is the largest of them all. [223] The Indians hunt all of them with the help of dogs trained for this purpose.

PICAFLOR /hummingbird/. -- Many of these birds are seen, but it seems that there is only one species here. These are the smallest ones, and in Chiriguano the picaflor is called "Chino." It can hang its nest on any little branch of a tree and also in the straw or hollow cane of the roofs. It is only

5:Nordenskiöld E-5,V(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

shall see that the methods of fishing differ somewhat in the different rivers. At the Rio Pilcomayo the Indians must always have found a good supply of food. As many Chiriguano live by very insignificant streams they never have the opportunity of fishing. The Chané all live in places where they are able to procure fish during some part of the year at least.

Big game is scarce in the land of the Chiriguano and Chané. Nor are these Indians keen huntsmen. One seldom sees game that has been killed by them in their huts. The great flocks of fat pigeons that settle in their fields are for the most part left unmolested.

As we shall see in the following the Chiriguano and Chané live mostly by tilling the ground. Owing to the comparative dryness of their land maize is cultivated more than anything else. It is the ease with which this plant can be grown here, that makes the land of the Chiriguano and Chané a good land to dwell in.

The fruit of the carob-tree (algarrobo) is the most important wild fruit. Probably no careful study has ever been made of the climatic conditions of the Chiriguano and Chané country. It is situated in the tropics, north of the tropic of Capricorn and the traveller there of course suffers more from heat than cold. In May and June especially, however, when there is a strong south wind, it is agreeable to have a well built house, warm clothes and a snug bed. The rains begin in December and leave off in April or May. It sometimes happens that there is little or no rain and then the crops are a failure. They are often destroyed by grasshoppers.

5:Nordenskiöld E-5,4 (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

IV.

Hunting Equipment.

C Ce 411 [224] [223]

The Chiriguano and the Chané are not keen huntsmen. They are rarely seen out hunting. Their hunting-weapons are the bow and arrow, the pellet-bow, clubs, slings, and snares, all of their own manufacture. The Chiriguano have bird-nets too, and formerly they had the bola as well. The Chiriguano and the Chané have no weapons exclusively used in warfare. Formerly they had lances[1]).

Ce 411

The bow and arrow are going quite out of use among these Indians except for fishing and as a weapon for boys. The degenerate type of bow now seen among the Chané and Chiriguano is certainly not original. According to LIZARRAGA[2]) the Chiriguano used to have bows of a man's height. It is of great interest to learn from LIZÁRRAGA that the Chiriguano used to protect their left wrist with a small piece of wood to prevent the skin being grazed by the bow-string. Something similar occurs among the Ashluslay (see Part I. P. 42).

C [714]

Ce 411 [137] [824] [171]*

Their arrows are very like those used by the Choroti and Ashluslay. The arrow shafts are of the same kind of reed[3]). At the Rio Parapiti this plant, which grows abundantly beside the Rio Pilcomayo is cultivated by the Indians. On the Rio Parapiti there is a place called Ouivarenda, which means »where there is chuchio.» This plant, the *Gynerium* sp. whose seed-stalks so many Indian tribes use

[1]) CHOMÉ P. 331.

[2]) P. 328. 4/4 »Andan desnudos y quando mucho qual ó qual tiene una camisetilla hasta el ombligo; . . . son grandes flecheros; sus armas son arco y flecha; el arco tan grande como el mismo que lo tira, y porque la cuerda no lastime la mano izquierda, en la muñeca encajan un trocillo de madera y allí da la cuerda».

[3]) *Arundo donax.*

4/4 [Errata: this should read "See Serrano y Sanz P. 328."
(4 errata sheet, Cat. 116, P. 245 -- Analyst.]

5:Nordenskiöld E-5,4 (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

of the Choroti and Ashluslay. As far as I know they are only used for hunting peccary. These animals are brought to bay by dogs and killed with clubs. I do not venture to say where this most primitive kind of club originated.

Fig. 11.

Fig. 9.

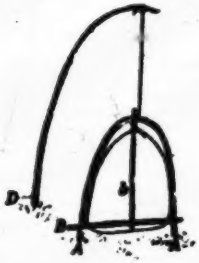

Fig. 12.

Fig. 10.

Fig. 9. Club of hard wood. Chiriguano. R. M. E. 580. 1/8.
» 10. Parrot-snare. Chané, Rio Parapiti. R. M. P. 1/11.
» 11. Parrot-snare made of a piece of twine and a feather. The specimen depicted is from the Tapiete. R. M. L. 267. 1/2.
» 12. Snare. Chané, Rio Itiyuro.

8:Nordenskiöld E-5,1(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

C
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223 At least three kinds of bird snares are used. One is a snare fixed onto a long rod (fig. 10).

It is used in the following way: A tame parrot is tied to a thick bush in which the hunter is concealed. When the wild parrots, which have been decoyed by the confined parrot, settle in the bush, they are snared by the Indian hidden there. I have seen similar rod-snares among the Chané and the Tapiete. According to GUMILLA[1]) snares of this kind were used for quail-hunting on the Llanos de Casanàre, in Chìre and Tocaria, at Neyva and Vaguè and at the Rio Tercero between Buenos Aires and Tucumau.

C
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* [171]

According to GUMILLA, HERRERA[2]) speaks of these snares being used in hunting parrots in Cuba. According to MARTIUS[3]) Indian boys in Brazil used these snares. Unfortunately he does not mention in what tribe or tribes he saw them. De PAULA SOUZA[4]) speaks of the same kind of snare from the Caingang, VASCONCELLOS[5]) from Indians on the Brazilian coast, and AMBROSETTI from the Cainguá[6]).

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* 171

Another bird snare found among the Chané is the one depicted here (fig. 12). Snares constructed on the same or a similar principle I have seen among the Choroti. KOCH-GRÜNBERG[7]) depicts similar snares, in use among the Indians by the Rio Caiarý in northwestern Brazil, and AMBROSETTI from the Cainguá[8]). It is certain that similar snares are found among many other Indians, though they have not been studied particularly. As I have already mentioned in the first part of this book I will in time describe what I have collected in the way of snares and traps during

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[1]) T. 2, P. 209.
[2]) Decada I, lib. 9, cap. 4.
[3]) (1) P. 669.
[4]) P. 744.
[5]) P. LXXVIIII.
[6]) (7) P. 728.
[7]) (2) Vol. I, p. 227.
[8]) (7) P. 730.

5:Nordenskiöld E-5,f (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8
South American Indians S3

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224

Map 4. The distribution of the hunting net.

5:Nordenskiöld E-5,1(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

C
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*171
C
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*171
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my travels. Though rather an extensive collection, it is quite insufficient for comparative researches.

The bird-nets used for hunting, occasionally found among (4) the Chiriguano, are of great interest (fig. 13 and map 4). I have not seen hunting nets elsewhere. Bird-nets are mentioned by several writers from the Alakaluf. These Indians and the Chonos were also acquainted with seal-nets. The statements in literature about these nets are to be found in COOPER'S[1]) excellent work. CREVAUX speaks of hunting nets from (4S) the Miraña[2]). UHLE[3]) mentions finds of the kind in Atacama. JOYCE[4]) speaks of nets that were used for hunting deer and birds on the coast of Peru. He depicts a very interesting earthenware vessel found at Trujillo representing a deer-hunt in which the huntsmen used the throwing stick and the hunting net. COBO[5]) speaks of bird-nets from the Inca. PALOMINO[6]) mentions nets used for deer-hunting from Chuquimayo in northern Peru. Hunting-nets are also mentioned by ORTIGUERA[7]) and by the author of Jornada de Omagua y Dorado[8]) from the Aruaquinos on the Amazon. From what OVIEDO Y VALDES[9]) says, the Indians also used hunting nets on the Rio Orinoco. GOMARA[10]) mentions nets from Cumaná in which ant-eaters were caught.

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[1]) P. 190.

[2]) After DENIKER (2) P. 640. «Quoique vivant sur les bords de rivières poissoneuses, ils ne pêchent point et se bornent á chasser comme les anciens Quichua á l'aide de filets tendus entre les arbres, dans lesquels ils poussent, á force de cris et de gestes, les bêtes effarouchées.»

[3]) (5) P. 109.

[4]) (1) P. 124.

[5]) T. 4, P. 225.

[6]) P. XLVIII.

[7]) P. 370.

[8]) P. 448.

[9]) T. 2, P. 221. «Toman codorniçes y conexos y tórtolas en mucha cantidad con laços y redes: asi tambien zorras y raposos, como muchos puercos salvajes de los que llaman *vaquiras*.»

[10]) P. 206.

5:Nordenskiöld E-8/1 (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

SUAREZ DE CEPEDA[1]) in his most interesting treatise on the Colima-Indians in Columbia, tells us that they tried to catch comets, which they imagined to be birds, with nets which they placed in their fields. This seems to prove that these Indians knew the use of bird nets. CASTELLANOS[2]) states that the Indians in the valley of the Patia (in southern Columbia) tried to catch the Spaniards' horses with nets. Most all of these authors who speak of the hunting net belong to the sixteenth century. This should give those who are doing work like mine some food for reflection. It proves how perfectly indispensable this old literature is as a means of learning the ethnology of the S. American Indians. *How imperfect a map of this kind would have been without the old literature!* One may ask why hunting nets are so scarce now. This is apparently owing to the fact that in most places where hunting nets have been in use the Indians have lost their original civilization. The above authors not having given us a detailed description of the nets, we do not know if they resemble those used by the Chiriguano. We are not even always told what was caught in these hunting nets.

The deer-nets used on the Peruvian coast were of course considerably larger than the nets used here. Their shape also was quite different. The Chiriguano nets are clap-nets and are used in the following way. The net is spread on the ground at a spot where there are plenty of pigeons. The pigeons are decoyed with maize to settle between the two halves of the net. A string runs from the net to a fowler

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[1]) P. 517. »Los rrayos que se estienden y esparcen de la cola ó cabeça de la cometa dizen que son plumas y pelos del paxaro que yendo bolando las vá despidiendo para fin de las cosas que viene á acabar: y para mitigar y rregalar la yra de la furia atajando por algun buen medio . . . . . y en sus labranças arman unas rredes de hilo muy de proposito estas dizen que son para enrredar y caçar en ellas la pobre cometa.«

[2]) P. 437.

5:Nordenskiöld E-5 (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

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hidden behind a bush or the like. With a pull of the string the man makes the net fall upon the maize-eating pigeons.

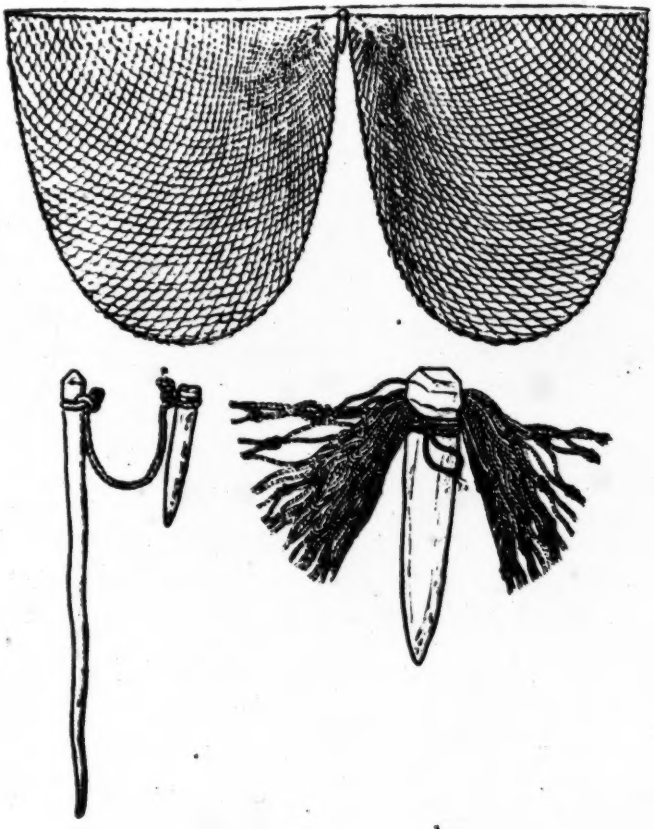

Fig. 13. Bird-net. Chiriguano. Caipipendi. R. M. E. 666.
Breadth 385 cm.
a = Sticks fixed at sides of bird net. 1/12. b = Middle part of bird net. 1/4.

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Deer nets were stretched between poles, as is plainly seen in the picture on the vessel reproduced by JOYCE. The nets mentioned by GOMARA from Cumaná as well as those

5:Nordenskiöld E-5,4 (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

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used by the Colima Indians to catch the »Comet-bird» were obviously also fixed nets.

We cannot prove that the different kinds of hunting-nets are of the same origin. Judging by the general distribution of the hunting-net in S. America, it is, however, likely that the Chiriguano learnt their use from the western culture zone. As has already been mentioned, COBO says that bird-nets occurred among the Inca.

/183 cont./

The Chané and the Chiriguano are not great hunters. Perhaps in former times there was more hunting. Their hunting weapons consist of bow and arrow. For hunting wild pigs they use clubs; for ostrich hunts the boleadora /bola/, "churima," was formerly used. Snares and bird nets are also found. In former times the hunters wore /184/ a costume of leather cut in imitation of a European cut, obviously copied from the Spaniards (1). This

1. Viedma already mentions this costume, p. 181.

was not permitted to hang in the house. Formerly, also among the Chané on the Rio Parapiti, no meat could be cooked in the house; rather, this had to be done a short distance away. Boys are, of course, eager hunters of small birds. Like the men, they sometimes use clay-projectile bows.

There are hunting dogs specially trained for hunting wild pigs. In a Chané village on the Rio Itiyuro I saw how all the dogs had a red cross painted on their heads, so that they would not be bitten by a mad dog running about in the vicinity. It was truly amusing to see how these heathen Chané protected their dogs against rabies with the sign of the cross.

Batirayu told me that Chané men, when they go hunting, are not permitted to sleep with their wives the night before.

Fishing is carried on differently in the various rivers.

In the Rio Itiyuro women and children almost exclusively do the fishing. There are only small fish there too. I saw three methods of fishing there. Angling, fishing with calabashes, and fishing by damming up pools. The fishhooks consist of bent needles obtained from the whites. Floats and sinkers are not used.

Fishing with calabashes is done in the following way. Several bunches of leaves, which give shade, are stuck in the bottom of the river, and in front of each of these is placed a calabash (Fig. 90) with sour, ground maize (residue from beer brewing). The fish gather in the calabashes, which are taken out from time to time by the women. The latter creep toward the calabash, quickly place a hand over the opening, lift /185/ it up, and then empty the contents into pits along the river bank.

7:Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

All arrow-shafts have the forepart strengthened by a waxed lashing of bast or string, of a width from 5 to 11 cm. The rear end of the shaft is generally also reinforced with a waxed lashing, applied immediately above the string notch. This latter lashing is usually about 1 cm wide. In those of the arrows here reproduced that seem to be without notch-end lashing, this has become detached, except in the case of the arrow in fig. 40, which never was provided with a lashing of this kind.

I have mentioned in the foregoing that the Chiriguano cultivate a kind of reed plant (Arundo donax) in order to obtain therefrom a suitable material for making arrow-shafts. In making a reed into an arrow-shaft, the arrow-head is fitted to the thicker end of the reed (the lower part of the growing reed), because in this way, when the arrow is being discharged, the joints glide more easily over the bow stave than if the thinner end of the reed were turned to the front. The reed joints are, moreover, smoothed down with some sharp instrument in order to lessen the friction between arrow and stave. Arrow-shafts of a certain very light kind of wood are used by the Chiriguano of San Luis. Such wooden shafts I only saw on the long bird and fish arrows. I have never observed either arrow poison, or feathering on arrows, among the Chiriguano, but Nordenskiöld has seen feathered Chiriguano arrows.[1]

For bird-shooting the Chiriguano use arrows with club-shaped, wooden heads. The striking-face of this blob-head is usually slightly conical, and sometimes given a small, cylindrical projection (fig. 212). This type of arrow-head has been constructed for the purpose of preventing the arrow — if it misses its object — from fixing itself in the stem or branch of a tree, and of making it instead drop to the ground. As birds frequently are sitting high aloft in the trees, the hunter would not have much chance of recovering his arrow, on missing his bird,

Fig. 206. 03. 3. 902. Fig. 207. 03. 3. 903. Arrows with lanceolate iron heads, and reed shafts. Chiriguano. San Luis. Bolivia. 1/6. Riksm.

[1] Nordenskiöld (13), p. 26.

[Text continues on p. 212]

7: Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

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223 if the arrow had not been given such a blob-shaped head. The force with which this lumpy head strikes its object, is sufficient to kill a middling-sized bird, provided the range is not too wide. The projection is intended for penetrating the feathers of the bird, so that the arrow shall not glance off the smooth plumage if the arrow should strike the bird at too acute an angle. These lumpy-headed arrows do not, as a rule, pierce the skin of the animal hit, which may be of advantage in killing small game.

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177 The pellet-bow is also used by the Chiriguano. Whether it forms a
194 constituent part of South American culture, or whether it has been introduced from India or Europe, is a question not conclusively settled. For my part I consider it probable that also in South America this weapon is an independent invention, but that the type (especially as regards its chambering) possibly may have been subjected to influence from the *European* pellet-throwing crossbow.[1] The fact of the pellet-bow being, apparently, of more common occurrence on the Chaco than elsewhere, may be explained from proximity to the Andes, and influence from Andean civilization. Within the area of ancient Peruvian culture, the stone sling was the most important distance weapon, and we may be quite sure that the nations then inhabiting the wooded spurs of the eastern Andes got to know the stone slings of the mountain folk. In forest regions, however, slings are unpractical weapons, as, in the whirling preliminary to the throw, they are apt to get caught in tree branches. The idea of using pebbles as projectiles instead of arrows, has however been adopted by the forest-dwelling tribes, who have tried to convert it into shooting with the bow. A stone that has been shot away does not need to be retrieved, but the loss of an arrow is always a serious matter! To my mind, it is in this manner that the pellet-bow of South America has originated. In districts where there are no stones, as for instance the greater part of the Chaco, clay pellets are used instead of stones.

As an argument in support of the view that the pellet-bow is not originally a South American weapon, it has been pointed out that it is not found in Peru, Central America, or Mexico. Its absence in Peru is easily explained, as this country is in its greater part almost entirely treeless, so that here the stone sling would be a weapon so infinitely superior to the pellet-bow that the use of the latter would be purpose-

[1] For discussion of this matter, vide: Nordenskiöld (11), pp. 50—53. von Rosen (8), pp. 174—180. Nordenskiöld (12), pp. 28—30.

/39 cont./

Cc 231 Tamed wild animals are rarely found inside their houses, except that they do have some parrots (182) /see footnote 182 above/.

Hunting

Cc 224 [433] [411] [439] We have explained before that, because of the lack of animals that can be eaten in the territory of the Chiriguano and Chané, hunting is secondary among their means of subsistence, and in accordance with this we know through old documents that the feathers for their arrows were introduced to the Chiriguano by other Indian tribes who were their tributaries (183). The raising of domestic livestock gives them a

Cc [231]

183. Moreno II, 121.

C 224 greater opportunity to obtain animal foodstuffs. In accordance with the fact that the Chiriguano, at least today, are not first-class hunters, the most common method of hunting among them is the use of traps (184). Nordenskiöld describes three

C 223

184. V. Rosen, op. cit., p. 205.

different kinds of traps, all three of which are used for catching birds (185). The first kind consists of a simple noose and is used

185. Nord. 2, pp. 32, 33, and 85, Fig. 10, 12, and 13.

C [191] with the help of calls. The second kind, which is common among various other tribes of Indians, is used, for example, also by the Kaingua /Caingua/. The third kind consists of a net made in two parts and fixed to the ground by means of stakes. In one

Cc [193] [223] of the Chané legends recorded by Nordenskiöld, a trap for catching doves is mentioned (186).

186. Nord. 1, p. 279.

Chane SF8
Izozo

/40 cont./

steadily progressing, a consequence of its degeneration resulting from its gradually falling into disuse.

The form of all the bows collected among the Izozó is the same, discounting the insignificant differences with regard to their length. The wood of the bow, which is approximately 3 cm. wide, is flat on the side towards the string and convex on the opposite side. To better fasten the bowstring, each of them is provided at its ends with a quite marked narrowing and always considerably shorter at the upper end than at the lower end. /41/ Three of these Izozó bows show, when not flexed, the reflex form already mentioned by v. Rosen with respect to the Chiriguano bows. The bowstring, made of twisted strips of animal hide, is fastened in the common manner used by South American Indians. By means of a noose with a knot, it goes around the narrowing of the upper end of the bow, while the loop at the lower end is made so that it can either shorten or lengthen the bowstring as necesary. Cf. Fig. 37, a and b /see p. 90/. In all these bows a large part of the string is rolled up as a reserve around the wood of the bow. Bow I. A. 757, whose wood shows cracks on the side toward the string, has wood reinforcements in two places, one of them consisting of a wrapping with thread and the other a piece of the skin of a cow's tail, which has been slipped like a sleeve over the wood of the bow. Cf. Figure 37 /see p. 90/.

The three bows I. A. 758-760, made of light-colored wood, correspond in form to the others, but they are poorly made and appear to be cheap merchandise for trading. Bow I. A. 760 even has a cable wire in place of a string.

The small Chiriguano bow I. A. 518 is a bow made for children for shooting light arrows with a wire point, which have been enumerated in great number in the above list.

The length of the arrows I collected among the Chiriguano and Izozó is somewhat behind with respect to the length of the corresponding bows. The longest among them is a Chiriguano arrow for shooting birds, fitted with a club rather than a point, with a length of 1.11 m. Among the arrows fitted with iron